AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended): A method of controlling a continuously-variable drive train of a motor vehicle, said drive train comprising an engine unit having an outlet shaft driving a wheel shaft via a variable-speed transmission adapted to modify the ratio of the speed of rotation of the wheel shaft and of the engine outlet shaft in continuous manner, in which method, a unit time interval (t_i) is defined and over each unit time interval the following steps are performed:

· estimating the value of an acceleration control variable (P_1);

· estimating the value of the vehicle speed (V);

· estimating the value of the speed of rotation (ω) of the engine outlet shaft; and

· controlling the speed of rotation (ω) of the engine outlet shaft as a function of said estimated values (P1, V, ω); and

wherein said control is performed by implementing the following steps:

· determining a mode of operation from amongst a permanent mode and a transient mode, as a function of a set of variables comprising said estimated values (P_1, V, ω); and

· correcting the value of the speed of rotation (ω) of the outlet shaft in such a manner that:

· if the mode has been determined as being the permanent mode, then the <u>sliding</u> mean variation per unit time (L') of the gear ratio (L) over a period (T) of a plurality of unit time

intervals (t_i) ~~lies~~ is controlled to lie between a first threshold value (S_1) that is negative and a second threshold value (S_2) that is positive, wherein the mean variation per unit time (L') ~~is set with~~ has an absolute value of more than zero for the duration of at least ~~a portion of~~ one operating stage in the permanent mode; and

· if the mode has been determined as being the transient mode, then said sliding mean variation per unit time (L') of the gear ratio (L) ~~lies~~ is controlled to lie outside the range of values defined by the first and second threshold value (S_1, S_2).

2. (Previously presented): A control method according to claim 1, wherein the first threshold value (S_1) is, in absolute value, equal to the second threshold value (S_2).

3. (Previously presented): A control method according to claim 1, wherein the period (T) is of a duration greater than one second, and the first threshold value (S_1) and the second threshold value (S_2) has absolute values lying in the range 0.35 km/h to 0.45 km/h per 1000 rpm/s.

4. (Previously presented): A control method according to claim 1, wherein the duration (DT_0) of a stage in transient mode (T_0) is limited to a value lying between a third threshold (S_3) and a fourth threshold (S_4).

5. (Previously presented): A control method according to claim 4, wherein the third threshold value (S_3) is substantially equal to 0.3 s.

6. (Previously presented): A control method according to claim 4, wherein the fourth threshold value (S_4) is substantially equal to 0.7 s.

7. (Previously presented): A control method according to claim 1, wherein the absolute value of the mean variation (ΔL_0) of the gear ratio (L) over an operating stage in transient mode between two consecutive mode changes is limited to a value lying between fifth and sixth threshold values (S_5, S_6) that are positive.

8. (Previously presented): A control method according to claim 7, wherein during the initial mode change of operating stage into transient mode, the direction of variation in the gear ratio (L) is determined and:

· if the direction of variation is positive, then first and second fixed values are allocated respectively to the fifth threshold value (S_5) and to the sixth threshold value (S_6); and

· if the direction of variation is negative, then third and fourth fixed values are allocated respectively to the fifth threshold value (S_5) and to the sixth threshold value (S_6).

9. (Previously presented): A control method according to claim 8, wherein the first fixed value is greater than the third fixed value, and the second fixed value is greater than the fourth fixed value.

10. (Previously presented): A control method according to claim 9, wherein the first fixed value is substantially equal to 35 km/h per 1000 rpm.

11. (Previously presented): A control method according to claim 9, wherein the second fixed value is substantially equal to 80 km/h per 1000 rpm.

12. (Previously presented): A control method according to claim 9, wherein the third fixed value is substantially equal to 25 km/h per 1000 rpm.

13. (Previously presented): A control method according to claim 9, wherein the fourth fixed value is substantially equal to 50 km/h per 1000 rpm.

14. (Currently amended): A control method according to claim 1, wherein if the mode is determined as being the permanent mode, the mean variation (L') of the gear ratio has a fixed value during the at least one operating stage in the permanent mode, and the value of the gear ratio (L) is limited at each instant to lie within a range of values centered on a mean value equal to the gear ratio (L) at the initial instant of the at least one operating stage in permanent mode

plus the product of said mean variation (L′) per unit time multiplied by the period of time between said initial instant and the instant in question, said range being of predetermined amplitude (E).

15. (Previously presented): A control method according to claim 14, wherein said amplitude (E) is substantially equal to 50 km/h per 1000 rpm.

16. (Previously presented): A control method according to claim 9, wherein the acceleration control variable (P_1) represents the position of the accelerator pedal.

17. (Previously presented): A control method according to claim 9, wherein the slope of the road is estimated and the set of variables includes the estimated value for the slope.

18. (Previously presented): A control method according to claim 17, wherein a mode-determination period is defined, and it is determined that the mode of operation is transient mode in at least one of the following circumstances:

· over said mode-determination period, the variation in the speed value (V) and the variation in the slope value are, in absolute value, less than respective predetermined threshold values, and the variation in the value of the acceleration control variable is, in absolute value, greater than a predetermined threshold value;

· over said mode-determination period, the variation in the value of the acceleration control variable and the variation in the value of the slope are, in absolute value, less than respective predetermined threshold values, and the variation in the speed value is, in absolute value, greater than a predetermined threshold value; and

· over said mode-determination period, the variation in the value of the acceleration control variable (P_1) and the variation in the value of the speed variable (V) are, in absolute value, less than respective predetermined threshold values, and the variation in the slope value is, in absolute value, greater than a predetermined threshold value.

19. (New): A control method according to claim 1, wherein the mean variation (L') of the gear ratio has a fixed value during each operating stage in the permanent mode.

20. (New): A control method according to claim 19, wherein if the mode is determined as being the permanent mode, the value of the gear ratio (L) is limited at each instant to lie within a range of values centered on a mean value equal to the gear ratio (L) at the initial instant of each operating stage in permanent mode plus the product of said mean variation (L') per unit time multiplied by the period of time between said initial instant and the instant in question, said range being of predetermined amplitude (E).